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10/806,684	03/22/2004	Kazumasa Yoshikawa	CFA00061US	2363

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CANON U.S.A. INC. INTELLECTUAL PROPERTY DIVISION
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EXAMINER

MISLEH, JUSTIN P

ART UNIT	PAPER NUMBER
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2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/806,684	Applicant(s) YOSHIKAWA, KAZUMASA	
	Examiner JUSTIN P. MISLEH	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4 - 7 and 20 - 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 - 7 and 20 - 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to Claims 4 and 20 have been considered but are moot in view of the new grounds of rejection. Applicant's arguments with respect to Claims 5 and 222 have been considered but are moot in view of the new interpretation of Iguchi et al.
2. Claim 4, which previously depended from Claim 2 which previously depended from independent Claim 1, has been rewritten in independent form. Likewise, Claim 5, which previously depended from Claim 3 which previously depended from independent Claim 1, has been rewritten in independent form. Because of the new grounds of rejection for Claim 4 and the new interpretation of Iguchi et al. for Claim 5, this Office Action is Non-Final and meant to replace the Non-Final Office Action mailed November 5, 2007.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

4. **Claims 6, 7, 21, and 23** are objected to because of the following informalities: lack of clarity and precision.

The Examiner believes the newly-amended language of Claims 6/21 and Claims 7/23 is not entirely in accordance with figures 1 – 3. The relay unit (700) has a switch (701) which switches between outputting either Vref3, representing AF, or one outputting one of Vref1 or Vref2, representing MF Speed Control and MF Position Control respectively. Therefore, the switch (701) multiplexes between the Speed/Position Control signals and AF signals. Together, the “MF Command Signal” and the multiplex signal are sent along the “Relay Unit Cable 800” to the “Lens Unit 100” (see page 14, lines 5 – 8).

However, the claim language of Claims 6/21 recites, "wherein signals associated with automatic focal point detection focusing and remote commands output from the said first switching signal means are multiplexed with signals associated with speed control and positional control of the focus lens output from said second switching input means to generate multiplex means." This claim language does not appear to be completely in accordance with the Examiner's understanding of the embodiment of figures 1 – 3.

Furthermore, the claim language of Claims 7/23 recites, "wherein signals associated with automatic focal point detection focusing and remote commands output from the said first switching signal means are multiplexed with remote command control signals output from said first remote command generating means to generate multiple signals." This claim language does not appear to be completely in accordance with the Examiner's understanding of the embodiment of figures 1 – 3.

For the purposes of examination, the Examiner will interpret Claims 6/7/21/23 as simply requiring that the switching between speed control and positional control of the focus lens serves as the remote commands from said remote control unit.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 5, 7, 22, and 23** are rejected under 35 U.S.C. 102(b) as being anticipated by Iguchi et al. (US 4,763,154).

7. For **Claims 5 and 22**, Iguchi et al. disclose, as shown in figure 10, a focal point detection system comprising:

an optical unit (encoder 157, set position detector 156, focal length detector 155, and lens 111) having a focus lens (lens 111);

a remote control unit (manual range setting unit 162) for remotely controlling said focus lens (111) in said optical unit (157, 156, 155, and 111); and

a relay unit (motor driver circuit 163) including:

an input terminal communicably coupled between said remote control unit (manual range setting unit 162 is remote to the identified relay unit) and said optical unit (157, 156, 155, and 111), for receiving signals from said remote control unit (The details of the motor driver circuit 163, which the Examiner considers to be the relay unit, are not shown. However, the manual range setting unit 162 provides input signals to the motor driver circuit 163. The motor driver circuit 163 must have an input terminal to receive these signals);

an output terminal communicably coupled to an optical unit (encoder 157, set position detector 156, focal length detector 155, and lens 111) having a focus lens (lens 111), the output terminal for providing said signals from the remote control unit (manual range setting unit 162) to the optical unit (Again, the details of the motor driver circuit 163, which the Examiner considers to be the relay unit, are not shown. However, the motor driver circuit 163 drives the optical unit via the motor 161. Therefore, the motor driver circuit 163 must have an output terminal to deliver the driving signals);

first switching signal input means for controlling the focus lens (111) by switching between automatic focal point detection focusing and remote commands from said remote control unit (Switch 158, within the CPU 143, decides between automatic focus control and manual focus control and the CPU 143 send a control signal to the motor driver circuit 163 to indicate the selected mode. The motor driver circuit 163 interprets this control signal drives the optical unit with signals received from the manual range setting unit 162 or signals received from the CPU 143. The manual range setting unit 162 signals are used for manual focus of the optical unit and the CPU 143 signals are used for automatic focus of the optical unit. Again, while the details of the motor driver circuit 163, which the Examiner considers to be the relay unit, are not shown, there must be a first switching signal input means to interpret and translate the control signal. See column 15, line 42 – column 16, line 24),

wherein said input terminal (see above interpretation) is communicably coupled to a first remote command generating means (manual range setting unit 162) for performing remote operations to control the focus lens (111; see column 16, lines 4 – 7), and

wherein output signal from said first switching input means (see above interpretation) are multiplexed with remote command control signals output from said first remote command generating means (In the present application, multiplexed simply means switched. In figure 1 of the present application, switch 701 simply switches between an AF control signal or signals received from a remote control unit that represent manual focus signals. Likewise, the motor driver circuit 163 decides whether to drive the motor using either signals provided from the manual range setting unit 162 for manual focusing or from the CPU 143 for automatic focusing.).

8. As for **Claims 7 and 23** (please see claim objection above), Iguchi et al. disclose, as stated above, sending remote commands from the manual range setting unit (162), which serves as the remote control unit. Kawamura et al. further teach, as stated above, send speed/positional control signals from a remote control unit.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 4, 6, 20, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Iguchi et al. (US 4,763,154) in view of Kawamura et al. (US 6,219,098 B1).

11. For **Claims 4 and 20**, Iguchi et al. disclose, as shown in figure 10, a focal point detection system comprising:

an optical unit (encoder 157, set position detector 156, focal length detector 155, and lens 111) having a focus lens (lens 111);

a remote control unit (manual range setting unit 162) for remotely controlling said focus lens (111) in said optical unit (157, 156, 155, and 111); and

a relay unit (motor driver circuit 163) including:

an input terminal communicably coupled between said remote control unit (manual range setting unit 162 is remote to the identified relay unit) and said optical unit (157, 156, 155, and 111), for receiving signals from said remote control unit (The details of the motor driver circuit 163, which the Examiner considers to be the relay unit, are not shown. However, the manual range setting unit 162 provides input signals to the motor driver circuit 163. The motor driver circuit 163 must have an input terminal to receive these signals);

an output terminal communicably coupled to an optical unit (encoder 157, set position detector 156, focal length detector 155, and lens 111) having a focus lens (lens 111), the output terminal for providing said signals from the remote control unit (manual range setting unit 162) to the optical unit (Again, the details of the motor driver circuit 163, which the Examiner considers to be the relay unit, are not shown. However, the motor driver circuit 163 drives the optical unit via the motor 161. Therefore, the motor driver circuit 163 must have an output terminal to deliver the driving signals);

first switching signal input means for controlling the focus lens (111) by switching between automatic focal point detection focusing and remote commands from said remote control unit (Switch 158, within the CPU 143, decides between automatic focus control and manual focus control and the CPU 143 send a control signal to the motor driver circuit 163 to

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indicate the selected mode. The motor driver circuit 163 interprets this control signal drives the optical unit with signals received from the manual range setting unit 162 or signals received from the CPU 143. The manual range setting unit 162 signals are used for manual focus of the optical unit and the CPU 143 signals are used for automatic focus of the optical unit. Again, while the details of the motor driver circuit 163, which the Examiner considers to be the relay unit, are not shown, there must be a first switching signal input means to interpret and translate the control signal. See column 15, line 42 – column 16, line 24),

wherein said input terminal (see above interpretation) is communicably coupled to second switching signal input means (manual range setting unit 162) for controlling the focus lens (111; see column 16, lines 4 – 7), and

wherein output signal from said first switching input means (see above interpretation) are multiplexed with switching signals output from said second switching signal input means (In the present application, multiplexed simply means switched. In figure 1 of the present application, switch 701 simply switches between an AF control signal or signals received from a remote control unit that represent manual focus signals. Likewise, the motor driver circuit 163 decides whether to drive the motor using either signals provided from the manual range setting unit 162 for manual focusing or from the CPU 143 for automatic focusing.).

While Iguchi et al. disclose a manual range setting unit (162), which serves as the second switching signal means, for controlling the focus lens (111); Iguchi et al. do not disclose particular of the manual range setting unit (162). More specifically, Iguchi et al. do not disclose wherein the manual range setting unit (162) outputs a signal for switching between speed control and positional control of the focus lens (111).

On the other hand, Kawamura et al. also disclose a remote control unit for controlling a optical unit. Specifically, Kawamura et al. teach, as shown in figure 4, a remote control unit (70) for controlling an optical unit (100), which includes a master lens group (20). Furthermore, Kawamura et al. provide, as stated in column 5 (line 34 – 63), in the remote control unit (70) switching means (rate/position changeover switch 62) for switching between speed control of the master lens group (80) or position control of the master lens group (20). Therefore, Kawamura et al. teach a remote control unit (70) having a switching signal means for switching between either speed control of a lens or focus control of a lens.

Hence, at the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included a remote control unit having a switching signal means for switching between either speed control of a lens or focus control of a lens (as taught by Kawamura et al.) in the focal point detection system (disclosed by Iguchi et al.) for the advantage of *smoothly moving the lens* (see Kawamura et al., column 1, lines 48 – 50).

12. As for **Claims 6 and 21** (please see claim objection above), Iguchi et al. disclose, as stated above, sending remote commands from the manual range setting unit (162), which serves as the remote control unit. Kawamura et al. further teach, as stated above, send speed/positional control signals from a remote control unit.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lin Ye can be reached on 571.272.7372. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Justin P. Misleh/
Examiner, GAU 2622
April 2, 2008**